

## SEQUENCE LISTING

<110	> 1	EISAI	co.	, LI	D.											
<120	> 1	ADIP	PROT	EIN	AND	USE	THEF	REOF								
<130	> 2	2144.	0100	000												
<140 <141		JS 10 2003-	•	•	Ł											
<150 <151		JP 20 2002-	-	-	53											
<160	> !	9														
<170	> 1	Pater	ntIn	vers	sion	3.3										
<210 <211 <212 <213	> 2 > 1	1 2692 ONA Mus n	nuscu	ılus												
<220 <221 <222 <223	> ( >	CDS (80). /note			n-and	l alp	oha-a	actir	nin-k	oindi	ing p	orote	ein"			
<400 cgta		l gag t	gaca	aggag	gc to	gttgt	aago	gto	gcag	gcac	tgag	gccgo	cct o	cctca	aggtat	60
cctg	gct	ctg g	gaact	tgct											a gtt o Val	112
		aca Thr														160
		ccg Pro 30														208
		tcc Ser														256
		att Ile														304
		ttt Phe			_		_	_			_			_	_	352
_	_	tta Leu			_	_	_	_		_	_			_		400
ata	ctt	cag	caa	aaa	aac	cta	cta	acc	cag	aaa	agc	ata	gag	aca	cag	448

Val	Leu	Gln 110	Arg	Lys	Asn	Leu	Leu 115	Ala	Gln	Glu	Ser	Val 120	Glu	Thr	Gln		
		aag Lys														496	
		aag Lys														544	
		aga Arg														592	
	_	aag Lys				_		_								640	
		cgg Arg 190														688	
		aat Asn														736	
		aaa Lys														784	
		aaa Lys														832	
		gag Glu														880	
		atc Ile 270	Leu	Met	Glu		Ala	Glu	Leu	Lys	Lys	Val	Leu			928	
_	_	aag Lys		_				_			_	_	_	_		976	
		aga Arg														1024	
		gac Asp														1072	
		act Thr														1120	
		ttg Leu														1168	

350 355 360

				ggc Gly												1216
				act Thr												1264
	_		_	gct Ala 400	_	_	_			_	_	_	_	_		1312
-	_	_	_	gac Asp				_	_	_	_	_		_	_	1360
				cgc Arg												1408
	_			gag Glu	_	_		_	_			_	_	_		1456
				gag Glu												1504
_	_	_	_	ttt Phe 480			-									1552
				ctt Leu												1600
				cac His												1648
				cca Pro												1696
_				act Thr		_		_	_				_			1744
				atc Ile 560												1792
	_		_	gca Ala	_	_	_	_	_	_	_		_		_	1840
				tcg Ser												1888

			gat gac tta Asp Asp Leu		gtgeggge	1937
tgcagtgctg	ttcccagatg	tgcgctagag	gagttgacac	agggtgtagc	ataaagtcag	1997
tcgtctaact	taagatgctc	agagttgttt	gtttggactt	cgctgtcttc	ccccaaagag	2057
ctgaaatgct	aagctactta	aaaggatgca	aagctttggt	tgtgtgttag	taacagaagc	2117
ccctggctct	gtgactgcag	gaatgcatgg	cgtttggatg	gaaacagaag	cgctggaatg	2177
attgcctcgc	caggtaccga	gaagagcact	tttagggact	ggttcctgta	aacattaaat	2237
attcgtccca	agtgtggttg	gcattggaag	tgtagccttt	acttgaatgt	atactgtaga	2297
tttttaacaa	agcaggttct	atatttatta	tgtttagtgt	gattttggga	ttacctcttt	2357
catatgtttt	gtgtctgtac	ataaatatac	atgactatgt	taagaggctt	taaggtttaa	2417
aaacttcaca	ccatgcttga	gtatagcatt	tcatgccaat	taaaatgttt	tcagtggcat	2477
ggtgtttaca	gaggttagga	ccactgccac	atgacagtta	agactttatt	tttaagccat	2537
ctgggcaata	aaaattcaaa	gccccttcat	aagctgagtt	cagataacta	gaactactaa	2597
cgttacattt	ttgagatttt	taaagcattg	tattttattt	tatatatgtg	aatgttataa	2657
tttctaagag	gaatattgat	tatggagtaa	tgggg	•		2692

<210> 2

<211> 615

<212> PRT

<213> Mus musculus

<400> 2

Lys Asn Leu Ser Gln Tyr Thr Ser Glu Thr Lys Met Ser Pro Ser Ser 20 25 30

Leu Tyr Ser Gln Gln Val Leu Cys Ser Ser Val Pro Leu Ser Lys Asn 35 40 45

Val His Gly Val Phe Gly Val Phe Cys Thr Gly Glu Asn Ile Glu Gln 50 55 60

Ser Ile Ser Tyr Leu Asp Gln Glu Leu Thr Thr Phe Gly Phe Pro Ser 70 75 80

Leu Tyr Glu Glu Ser Lys Ser Lys Glu Ala Lys Arg Glu Leu Asn Ile 85 90 95 Val Ala Val Leu Asn Cys Met Asn Glu Leu Leu Val Leu Gln Arg Lys
100 105 110

Asn Leu Leu Ala Gln Glu Ser Val Glu Thr Gln Asn Leu Lys Leu Gly
115 120 125

Ser Asp Met Asp His Leu Gln Ser Cys Tyr Ala Lys Leu Lys Glu Gln 130 135 140

Leu Glu Thr Ser Arg Arg Glu Met Ile Gly Leu Gln Glu Arg Asp Arg 145 150 155 160

Gln Leu Gln Cys Lys Asn Arg Ser Leu His Gln Leu Leu Lys Asn Glu 165 170 175

Lys Asp Glu Val Gln Lys Leu Gln Asn Ile Ile Ala Ser Arg Ala Thr 180 185 190

Gln Tyr Asn His Asp Val Lys Arg Lys Glu Arg Glu Tyr Asn Lys Leu 195 200 205

Lys Glu Arg Leu His Gln Leu Val Met Asn Lys Lys Asp Lys Asn Ile 210 215 220

Ala Met Asp Val Leu Asn Tyr Val Gly Arg Ala Asp Gly Lys Arg Gly 225 230 235 240

Ser Trp Arg Thr Asp Lys Thr Glu Ala Arg Asn Glu Asp Glu Met Tyr 245 250 255

Lys Ile Leu Leu Asn Asp Tyr Glu Tyr Arg Gln Lys Gln Ile Leu Met 260 265 270

Glu Asn Ala Glu Leu Lys Lys Val Leu Gln Gln Met Lys Lys Glu Met 275 280 285

Ile Ser Leu Leu Ser Pro Gln Lys Lys Lys Pro Arg Glu Arg Ala Glu 290 295 300

Asp Gly Thr Gly Thr Val Ala Ile Ser Asp Ile Glu Asp Asp Ser Gly 305 310 315 320

Glu Leu Ser Arg Asp Ser Val Trp Gly Leu Ser Cys Asp Thr Val Arg 325 330 335 Glu Gln Leu Thr Asn Ser Ile Arg Lys Gln Trp Arg Ile Leu Lys Ser 340 345 350

His Val Glu Lys Leu Asp Asn Gln Ala Ser Lys Val His Ser Glu Gly 355 360 365

Leu Asn Glu Glu Asp Val Ile Ser Arg Gln Asp His Glu Gln Glu Thr 370 375 380

Glu Lys Leu Glu Leu Glu Ile Glu Arg Cys Lys Glu Met Ile Lys Ala 385 390 395 400

Gln Gln Leu Leu Gln Gln Leu Ala Thr Thr Cys Asp Asp Asp 405 410 415

Thr Thr Ser Leu Leu Arg Asp Cys Tyr Leu Leu Glu Glu Lys Glu Arg
420 425 430

Leu Lys Glu Glu Trp Thr Leu Phe Lys Glu Gln Lys Lys Asn Phe Glu 435 440 445

Arg Glu Arg Arg Ser Phe Thr Glu Ala Ala Ile Arg Leu Gly Leu Glu 450 455 460

Arg Lys Ala Phe Glu Glu Glu Arg Ala Ser Trp Val Lys Gln Gln Phe 465 470 475 480

Leu Asn Met Thr Asn Phe Asp His Gln Asn Ser Glu Asn Val Lys Leu
485 490 495

Phe Ser Ala Phe Ser Gly Ser Ser Asp Pro Asp Asn Leu Ile Val His 500 505 510

Ser Arg Pro Arg Gln Lys Lys Leu His Ser Val Ala Asn Gly Val Pro 515 520 525

Ala Cys Thr Ser Lys Leu Thr Lys Ser Leu Pro Ala Ser Pro Ser Thr 530 540

Ser Asp Phe Arg Gln Thr His Ser Cys Val Ser Glu His Ser Ser Ile 545 550 555 560

Ser Val Leu Asn Ile Thr Pro Glu Glu Ser Lys Pro Ser Glu Val Ala 565 570 575

Arg Glu Ser Thr Asp Gln Lys Trp Ser Val Gln Ser Arg Pro Ser Ser 580 585 Arg Glu Gly Cys Tyr Ser Gly Cys Ser Ser Ala Phe Arg Ser Ala His 600 Gly Asp Arg Asp Asp Leu Pro <210> 3 <211> 3195 <212> DNA <213> Rattus norvegicus <220> <221> CDS <222> (79)..(1920) <220> <221> misc\_feature (2422)..(2422) <222> "n"=any one base of a, t, c, or g <400> 3 gtaggagagt gacaggaget gttgtgcatg ccccagcact gaactgcctt ctcagggacc 60 ctggctctgg gactggct atg gga gat tgg atg act gtt aca gat cca gtt 111 Met Gly Asp Trp Met Thr Val Thr Asp Pro Val 159 ctg tgt aca gaa aac aaa aat ctc tct caa tat acc tca gaa aca aag Leu Cys Thr Glu Asn Lys Asn Leu Ser Gln Tyr Thr Ser Glu Thr Lys 20 207 atg tet ecg tea agt tta tac teg cag caa gta etg tge tet gea aca Met Ser Pro Ser Ser Leu Tyr Ser Gln Gln Val Leu Cys Ser Ala Thr cct tta tcc aag aat gtg cat ggt gtt ttc agt gcc ttc tgc aca gga 255 Pro Leu Ser Lys Asn Val His Gly Val Phe Ser Ala Phe Cys Thr Gly gag aac atc gaa cag agt att tcg tat ctt gat cag gaa ctg act acc 303 Glu Asn Ile Glu Gln Ser Ile Ser Tyr Leu Asp Gln Glu Leu Thr Thr 60 351 ttc ggt ttc cct tcc ttg tat gaa gaa tcc aaa agt aag gag gcg aag Phe Gly Phe Pro Ser Leu Tyr Glu Glu Ser Lys Ser Lys Glu Ala Lys 80 399 cga gag tta agt ata gtt gct ctt ctg aac tgc atg aat gag ctg ctt Arg Glu Leu Ser Ile Val Ala Leu Leu Asn Cys Met Asn Glu Leu Leu 100 105 95 gtg ctt cag cgg aag aac ctc ctg gcc cag gaa agc gtg gag aca cag 447

Val Leu Gln Arg Lys Asn Leu Leu Ala Gln Glu Ser Val Glu Thr Gln 115

110

120

								gac Asp								495
								tcc Ser								543
_		-	-	-	-		-	tgc Cys					_		-	591
								gta Val 180								639
_	_		_					cat His	_	-		-	_			687
								ctg Leu								735
								gtt Val								783
_		_	_					act Thr	_			_	_			831
_	_	_	_				_	ctg Leu 260		_				_	_	879
_	_		_	_	_			gag Glu						_	_	927
								ctt Leu								975
								ggc Gly								1023
gaa Glu	gac Asp	gac Asp	gct Ala	999 Gly 320	gag Glu	ctg Leu	agc Ser	aga Arg	gat Asp 325	ggt Gly	gtg Val	tgg Trp	agc Ser	ctt Leu 330	tcc Ser	1071
								aca Thr 340								1119
								aaa Lys								1167

			gag Glu													1215
			gag Glu													1263
	_		aag Lys	_	_	_	_			_		_	_	_		1311
			gac Asp 415													1359
			gaa Glu													1407
			ttt Phe													1455
			ttg Leu													1503
			cag Gln													1551
_			aaa Lys 495			_	_									1599
			gtc Val							_				_	_	1647
gct Ala			gtg Val													1695
			tca Ser													1743
			agt Ser													1791
			aga Arg 575													1839
	_		cgg Arg			_				_		_	_			1887
agc	tcc	cac	gtg	gaa	cga	gat	gac	tta	cca	tag	gtg	ctcg	ggc	tgca	gcgctg	1940

Ser Ser His Val Glu Arg Asp Asp Leu Pro 605 610

tcctggagtg	catgagagga	attgacacgg	ggtgtagcat	aaagtcagcc	atctaccgta	2000
agatgtcgga	gttatttgtt	tggacttccc	agtctttccc	caaagagctg	aaacgcttta	2060
gaggatgcga	aagctttggc	tgtgtgttag	taacagaagc	ctctggctct	gtgagtaaag	2120
gaatgtatgg	tgtttggtgg	gaaacaaaag	cacgagaatg	atttcctctt	ccgggtactg	2180
agaatagcac	ttttagggac	tgattcttgt	aaacattaaa	tttttgtccc	aagtatggtt	2240
ggcattggaa	gtttagtctt	tacttgaatg	tacactgtag	atttttaaca	aagcagttct	2300
atatttatta	tgtttagtgt	gattttggga	ttacctcttt	catatgtttt	ctgcctgtac	2360
ataaatatac	atgactatgt	taagaggctt	taaggtttaa	aaatttcaca	ccatgctcga	2420
gnatagcatt	tcatgccaat	taaaatgttt	tcagtggcat	ggtgtttaca	gatgtgttag	2480
gaccactgcc	acatgacagt	taagatttta	tttttaagcc	atttgggcaa	taaaaattca	2540
aagccacttc	ataagctaag	ttcagatagc	taaaactact	aacattacat	ttttgagatt	2600
tataaagcat	tatattttat	tttatatatg	tgactgttat	aatttctaag	aggaatgtgg	2660
attatgaagc	aatgggggaa	agacagaagt	gactaatagt	gcaagagcat	tgggtgaagg	2720
gacggctgat	gaggatatgg	gagacctggg	tggtgatctt	ttccttaccg	acggtgcggt	2780
gcggcgatct	ctgtaccgcc	agggctttct	atcattgcca	atacttttgt	aattaaagag	2840
attttcaact	acataccact	actaaagtaa	gacagtgtaa	aactttggct	tttgtaattg	2900
acactctgga	cactggtgtg	ttgttcattt	ctagaacaat	cgtaggctct	tttctctgtt	2960
tctgctgcat	gtttcttcat	gagaagtatg	ttactattga	cagtaatgac	actgacagtg	3020
actgtagacg	taggcccaga	cttctcctgg	gtggattttc	atccagcagc	ttttaagtgc	3080
ctcgccctgc	tegtetetge	acatageege	cgacacaagc	cctcgcttga	tgatgcagat	3140
agtccatctg	cctttctctc	cccttgccct	gctatgactg	ttgcattaaa	ttcat	3195

<sup>&</sup>lt;210> 4

Met Gly Asp Trp Met Thr Val Thr Asp Pro Val Leu Cys Thr Glu Asn 5 10

Lys Asn Leu Ser Gln Tyr Thr Ser Glu Thr Lys Met Ser Pro Ser Ser 20 25

<sup>&</sup>lt;211> 613 <212> PRT

<sup>&</sup>lt;213> Rattus norvegicus

<sup>&</sup>lt;400> 4

Leu Tyr Ser Gln Gln Val Leu Cys Ser Ala Thr Pro Leu Ser Lys Asn 35 40 45

Val His Gly Val Phe Ser Ala Phe Cys Thr Gly Glu Asn Ile Glu Gln 50 55 60

Ser Ile Ser Tyr Leu Asp Gln Glu Leu Thr Thr Phe Gly Phe Pro Ser 70 75 80

Leu Tyr Glu Glu Ser Lys Ser Lys Glu Ala Lys Arg Glu Leu Ser Ile 85 90 95

Val Ala Leu Leu Asn Cys Met Asn Glu Leu Leu Val Leu Gln Arg Lys 100 105 110

Asn Leu Leu Ala Gln Glu Ser Val Glu Thr Gln Asn Leu Lys Leu Gly
115 120 125

Ser Asp Met Asp His Leu Gln Ser Cys Tyr Ala Lys Leu Lys Glu Gln 130 135 140

Leu Glu Ala Ser Arg Arg Glu Met Ile Ser Leu Gln Glu Arg Asp Arg 145 150 155 160

Gln Leu Gln Cys Lys Asn Arg Asn Leu His Gln Leu Leu Lys Asn Glu 165 170 175

Lys Glu Glu Val Gln Lys Leu Gln Asn Ile Ile Ala Ser Arg Ala Thr 180 185 190

Gln Tyr Asn His Asp Val Lys Arg Lys Glu Arg Glu Tyr Asn Lys Leu 195 200 205

Lys Glu Arg Leu His Gln Leu Val Met Asn Lys Lys Asp Lys Asn Ile 210 215 220

Ala Met Asp Val Leu Asn Tyr Val Gly Arg Val Asp Gly Lys Arg Gly 225 230 235 240

Ser Trp Arg Thr Asp Lys Thr Glu Ala Arg Asn Glu Asp Glu Met Tyr 245 250 255

Lys Ile Leu Leu Asn Asp Tyr Glu Tyr Arg Gln Lys Gln Ile Leu Leu 260 265 270

Glu Asn Ala Glu Leu Lys Lys Val Leu Gln Gln Met Lys Lys Glu Met

275 280 285

Ile Ser Leu Leu Ser Pro Gln Lys Lys Pro Arg Glu Arg Ala Glu Asp Ser Thr Gly Thr Val Val Ile Ser Asp Val Glu Asp Asp Ala Gly Glu Leu Ser Arg Asp Gly Val Trp Ser Leu Ser Cys Asp Thr Val Arg Glu Gln Leu Thr Asn Ser Ile Arg Lys Gln Trp Arg Ile Leu Lys Ser His Val Glu Lys Leu Asp Asn Gln Ala Ser Lys Val His Ser Glu Gly Phe His Glu Glu Asp Val Ile Ser Arg Gln Asp His Glu Gln Glu Thr Glu Lys Leu Glu Leu Glu Ile Glu Arg Cys Lys Glu Met Ile Lys Ala Gln Gln Gln Leu Gln Gln Gln Leu Ala Thr Ala Cys Asp Asp Asp Thr Thr Ser Leu Leu Arg Asp Cys Tyr Leu Leu Glu Glu Lys Glu Arg Leu Lys Glu Glu Trp Ser Leu Phe Lys Glu Gln Lys Lys Asn Phe Glu Arg Glu Arg Arg Ser Phe Thr Glu Ala Ala Ile Arg Leu Gly Leu Glu Arg Lys Ala Phe Glu Glu Glu Arg Ala Ser Trp Val Lys Gln Gln Phe Leu Asn Met Thr Thr Phe Asp His Gln Asn Ser Glu Asn Val Lys Leu Phe Ser Ala Phe Ser Gly Ser Ser Asp Pro Asp Asn Leu Ile Val His Pro Arg Pro Arg Gln Lys Lys Pro His Ser Val Ala Asn Gly Val Pro 

AIG	530	1111	Der	БуБ	Бец	535	Буб	Ser	Бей	PIO	540	561	PIO	561	Asp	
Phe 545	Cys	Pro	Ser	Arg	Ser 550	Cys	Val	Ser	Glu	His 555	Ser	Pro	Val	Ser	Ala 560	
Leu	Thr	Val	Thr	Pro 565	Glu	Glu	Thr	Lys	Pro 570	Asn	Glu	Val	Gly	Arg 575	Glu	
Ser	Thr	Asp	Gln 580	Lys	Trp	Ser	Val	Val 585	Ser	Arg	Pro	Ser	Ser 590	Arg	Glu	
Gly	Сув	Tyr 595	Gly	Gly	Сув	Ser	Ser 600	Ala	Tyr	Thr	Ser	Ser 605	His	Val	Glu	
Arg	Asp 610	Asp	Leu	Pro												
<210	)> !	5														
<211	L> 2 2> I	22 מאר														
			ficia	al Se	equer	nce										
<220 <223		an a	rtif	icia	lly s	syntl	nesia	zed p	prime	er se	equei	nce				
<400		5 dad t	tgaca	aggag	ac to	<b>T</b>										22
-3	-55	JJ	- 5	J J	,     .	,										
<210		6														
<213 <212	L> : 2> 1	24 DNA														
<213	3 > 2	Arti	ficia	al S	equer	nce										
<220						1										
<223	3> 6	an a	rtif:	ıcıa.	тту я	synti	nesi	zea j	prime	er se	equei	ice				
<400		6 gag (	tttt	tcta	ca to	gac										24
<210		7														
<211 <212	L>	22 DNA														
			ficia	al S	eque	nce										
<220																
<223	3> ;	an a	rtif:	ıcia.	тту я	syntl	nesi	zed ]	prime	er se	eque	nce				
<400 cgta		7 gag 1	tgaca	agga	gc to	3										22
_		_	-													

23

```
<210> 8
<211> 23
<212> DNA
<213> Artificial Sequence
<220>
<223> an artificially synthesized primer sequence
<400> 8
ttcctgtttt tgcactgtag ctg
<210> 9
<211> 626
<212> PRT
<213> Homo sapiens
<400> 9
Thr Ser Ser Gly Ile Leu Ala Leu Glu Ile Ala Met Gly Asp Trp
                5
Met Thr Val Thr Asp Pro Gly Leu Ser Ser Glu Ser Lys Thr Ile Ser
            20
                               25
Gln Tyr Thr Ser Glu Thr Lys Met Ser Pro Ser Ser Leu Tyr Ser Gln
        35
                                           45
                           40
Gln Val Leu Cys Ser Ser Ile Pro Leu Ser Lys Asn Val His Ser Phe
    5.0
                       55
Phe Ser Ala Phe Cys Thr Glu Asp Asn Ile Glu Gln Ser Ile Ser Tyr
                    70
                                       75
                                                           80
Leu Asp Gln Glu Leu Thr Thr Phe Gly Phe Pro Ser Leu Tyr Glu Glu
                                   90
Ser Lys Gly Lys Glu Thr Lys Arg Glu Leu Asn Ile Val Ala Val Leu
                               105
            100
Asn Cys Met Asn Glu Leu Leu Val Leu Gln Arg Lys Asn Leu Leu Ala
                          120
Gln Glu Asn Val Glu Thr Gln Asn Leu Lys Leu Gly Ser Asp Met Asp
                      135
His Leu Gln Ser Cys Tyr Ser Lys Leu Lys Glu Gln Leu Glu Thr Ser
                               155
                    150
```

Arg Arg Glu Met Ile Gly Leu Gln Glu Arg Asp Arg Gln Leu Gln Cys

165 170 175

Lys Asn Arg Asn Leu His Gln Leu Leu Lys Asn Glu Lys Asp Glu Val 180 185 190

Gln Lys Leu Gln Asn Ile Ile Ala Ser Arg Ala Thr Gln Tyr Asn His 195 200 205

Asp Met Lys Arg Lys Glu Arg Glu Tyr Asn Lys Leu Lys Glu Arg Leu 210 220

His Gln Leu Val Met Asn Lys Lys Asp Lys Ile Ala Met Asp Ile 225 230 235 240

Leu Asn Tyr Val Gly Arg Ala Asp Gly Lys Arg Gly Ser Trp Arg Thr 245 250 255

Gly Lys Thr Glu Ala Arg Asn Glu Asp Glu Met Tyr Lys Ile Leu Leu 260 265 270

Asn Asp Tyr Glu Tyr Arg Gln Lys Gln Ile Leu Met Glu Asn Ala Glu 275 280 285

Leu Lys Lys Val Leu Gln Gln Met Lys Lys Glu Met Ile Ser Leu Leu 290 295 300

Ser Pro Gln Lys Lys Pro Arg Glu Arg Val Asp Asp Ser Thr Gly 305 310 315

Thr Val Ile Ser Asp Val Glu Glu Asp Ala Gly Glu Leu Ser Arg Glu 325 330 335

Ser Met Trp Asp Leu Ser Cys Glu Thr Val Arg Glu Gln Leu Thr Asn 340 345 350

Ser Ile Arg Lys Gln Trp Arg Ile Leu Lys Ser His Val Glu Lys Leu 355 360 365

Asp Asn Gln Val Ser Lys Val His Leu Glu Gly Phe Asn Asp Glu Asp 370 375 380

Val Ile Ser Arg Gln Asp His Glu Gln Glu Thr Glu Lys Leu Glu Leu 385 390 395 400

Glu Ile Gln Gln Cys Lys Glu Met Ile Lys Thr Gln Gln Gln Leu Leu 405 410 415 Gln Gln Leu Ala Thr Ala Tyr Asp Asp Asp Thr Thr Ser Leu Leu 420 425 430

Arg Asp Cys Tyr Leu Leu Glu Glu Lys Glu Arg Leu Lys Glu Glu Trp
435 440 445

Ser Leu Phe Lys Glu Gln Lys Lys Asn Phe Glu Arg Glu Arg Ser 450 455 460

Phe Thr Glu Ala Ala Ile Arg Leu Gly Leu Glu Arg Lys Ala Phe Glu 465 470 475 480

Glu Glu Arg Ala Ser Trp Leu Lys Gln Gln Phe Leu Asn Met Thr Thr 485 490 495

Phe Asp His Gln Asn Ser Glu Asn Val Lys Leu Phe Ser Ala Phe Ser 500 505 510

Gly Ser Ser Asp Trp Asp Asn Leu Ile Val His Ser Arg Gln Pro Gln 515 520 525

Lys Lys Pro His Ser Val Ser Asn Gly Ser Pro Val Cys Met Ser Lys 530 540

Leu Thr Lys Ser Leu Pro Ala Ser Pro Ser Thr Ser Asp Phe Cys Gln 545 550 555 560

Thr Arg Ser Cys Ile Ser Glu His Ser Ser Ile Asn Val Leu Asn Ile 565 570 575

Thr Ala Glu Glu Ile Lys Pro Asn Gln Val Gly Glu Cys Thr Asn 580 585 590

Gln Lys Trp Ser Val Ala Ser Arg Pro Gly Ser Gln Glu Gly Cys Tyr 595 600 605

Ser Gly Cys Ser Leu Ser Tyr Thr Asn Ser His Val Glu Lys Asp Asp 610 615 620

Leu Pro 625